

## **ATTACHMENT 5. Work Plan**

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## ***Project Description***

Montara Water and Sanitary District (MWSD or District) seeks funding through the Local Groundwater Assistance (LGA) grant to develop the Mid-Coastside Multi-Basin Groundwater Management Plan (GWMP). The following work plan outlines the initial development of the Mid-Coastside GWMP. The Mid-Coastside GWMP will be designed to promote sustainable resource use and effective long-term planning of groundwater throughout the San Mateo County Midcoast. The San Mateo County Midcoast extends from northern Half Moon Bay to Devil's slide and encompasses the communities of Montara, Moss Beach, Princeton, El Granada, and Miramar. The San Mateo Midcoast groundwater is found in the Half Moon Bay Terrace Basin<sup>1</sup>, a 9,150 acre basin located within the San Francisco Bay Hydrologic Region (see Figure 1).

MWSD proposes to develop the initial phase of the GWMP with LGA grant monies. Due to the complexity of the groundwater sub-basins throughout the Midcoast the primary focus of this initial GWMP is the Airport Terrace Sub-basin ("Airport Aquifer"). The Airport Aquifer is located at the base of the San Vicente Creek in the Half Moon Bay Airport in northern portion of the Half Moon Bay Terrace Basin (see Figure 2). It is the most dominant aquifer in the area and is a primary focus in the region for groundwater studies<sup>2</sup>, Environmental Impact Reports<sup>3</sup>, monitoring efforts<sup>4</sup> and other State funding applications<sup>5</sup> (see Project Description, Attachment 4: Files 2-8). MWSD and Coastside County Water District (CCWD) extract groundwater from the aquifer using domestic wells. In addition, groundwater is extracted through irrigation and domestic wells owned by Millennium Housing Pillar Ridge Mobile Home Park. Water quality concerns were elevated following the identification of nitrates, manganese, corrosivity and 1,2,3-TCP in the aquifer.

Adoption and implementation of the Mid-Coastside GWMP will improve groundwater management and knowledge of Midcoast basins within San Mateo County. This initial plan will be the first groundwater management plan developed in the Midcoast. Following development of this initial Airport Aquifer focused GWMP, the plan will be modified to include the remaining sub-basins throughout the Midcoast. The Mid-Coastside Multi-Basin GWMP is intended to be adaptive to changing conditions within the Midcoast aquifers and will be updated and revised over time to reflect progress made in achieving the GWMP objectives. The objectives of the plan is as follows:

- Develop the first Mid-Coast GWMP (primary focus on Airport Aquifer);
- Establish an Advisory Committee of Midcoast Stakeholders;
- Measure key hydrologic data needed for Midcoast basin management;
- Establish ongoing funding to maintain and update the Mid-Coastside GWMP to include

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1 DWR Bulletin 118 Basin 2-22

2 Balance Hydrologics, Inc., 2002, San Mateo County Mid-Coast Aquifers: Literature and Data Review  
Kleinfelder, 2008, San Mateo County Midcoast Groundwater Study, Phase II  
Balance Hydrologics, Inc., 2010, Midcoast Groundwater Study Phase III

3 Kleinfelder, 1989, Draft Montara – Moss Beach Water Well EIR

4 Montara Water and Sanitary District, 2011, CASGEM Monitoring Plan

5 Montara Water and Sanitary District, 2006, SRF Application No. 4110010-024 Water System Engineering Report  
Montara Water and Sanitary District, 2009, Proposition 50 Application No. P50-4110010-117 Technical Report

remaining Midcoast sub-basins; and

- Serve as a needed model for other small coastal basins on the California coast.

In order to achieve successful development and implementation of the Mid-Coastside GWMP, it is essential to foster partnerships and build consensus. An Advisory Committee made up of Midcoast Stakeholders will be established to guide this process. Potential Midcoast stakeholders include Montara Water and Sanitary District (MWSD), Coastside County Water District (CCWD), Resource Conservation District (RCD), Peninsula Open Space Trust (POST), Pillar Ridge Mobile Home Park, the future Big Wave development, local farmers and other stakeholders. The Advisory Committee will perform ongoing outreach to other stakeholders throughout the Midcoast to ensure broad understanding of the developing plan. Outreach will also include collaboration with state regulatory agencies including the Department of Water Resources, the California Department of Public Health and the Regional Water Quality Control Board.

The goal of the Mid-Coastside GWMP is to support the interest of its stakeholders and the public, ensure the future of groundwater supplies for the Midcoast, prevent further contamination of groundwater resources, and facilitate remediation efforts.

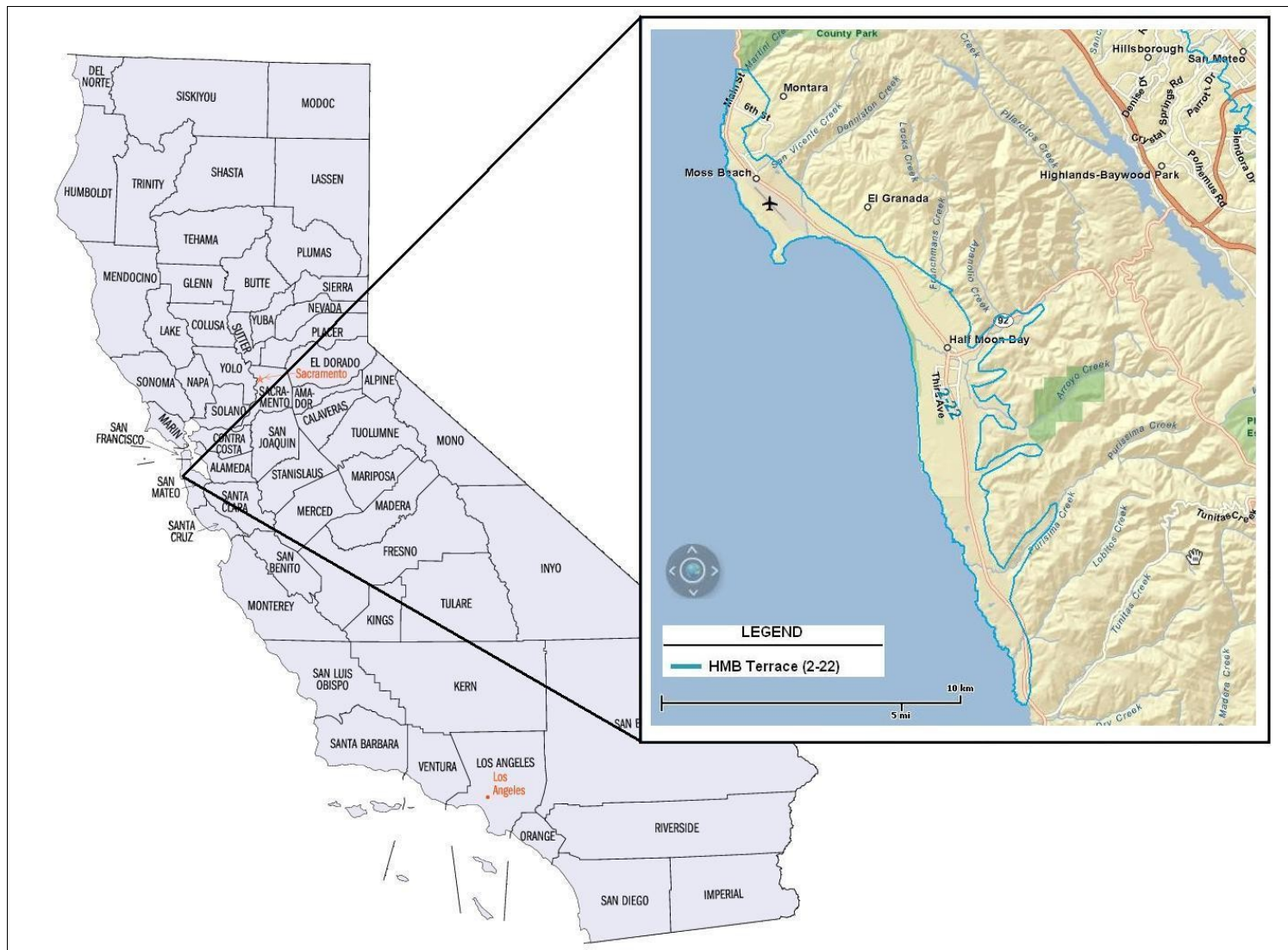
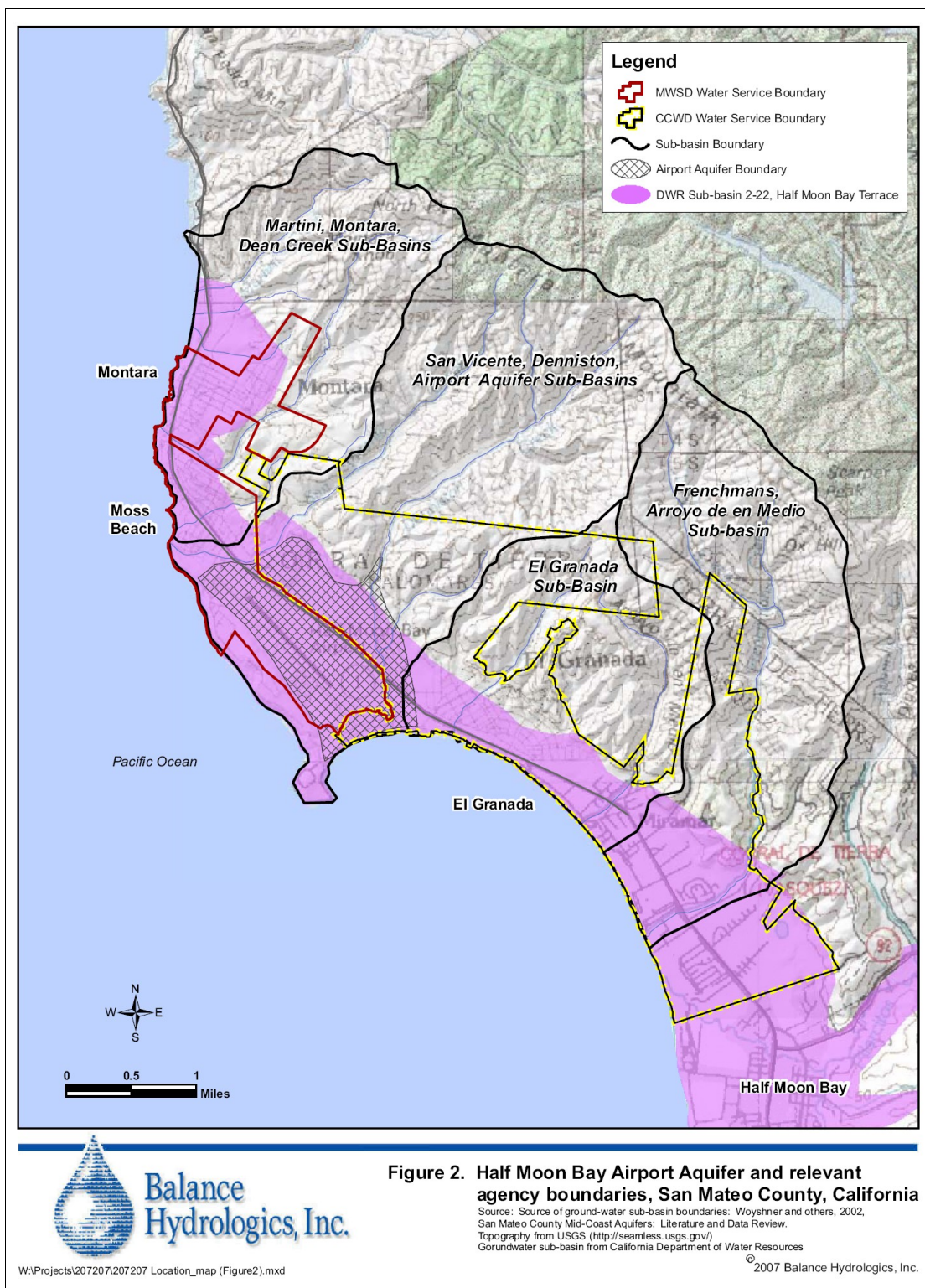


Figure 1. Half Moon Bay Terrace Basin (DWR Bulletin 118 Basin 2-22)



**Figure 2. Airport Terrace Sub-basin**  
Image courtesy of Balance Hydrologics, Inc.

## **Project Scope**

The Mid-Coastside Multi-Basin GWMP development scope will include these major tasks:

1. Stakeholder outreach and public participation;
2. Data collection and analysis;
3. Objectives and monitoring protocol development;
4. Future projects;
5. Implementation and Financing Plan;
6. Completion of GWMP;
7. Project management and coordination; and
8. Administration.

The above tasks are outlined below including the work items to complete each task and project deliverables completed under each task.

### **Task 1. Stakeholder Outreach and Public Participation**

#### **Stakeholder Outreach**

Extensive outreach is needed to reach all local and regional stakeholders prior to the development of the Mid-Coastside GWMP. Efforts will be made to reach stakeholders through website postings, newsletters and public hearings. After identifying stakeholders, an Advisory Committee will be formed to guide the development of the GWMP. The Advisory Committee will include at a minimum one representative from MWSD, CCWD and RCD. Following establishment of the Advisory Committee, a Memorandum of Understanding (MOU) may be developed to document the intent to develop and adopt the GWMP.

Outreach will also include collaboration with state regulatory agencies including the Department of Water Resources, the California Department of Public Health and the Regional Water Quality Control Board.

#### **General Outreach Materials**

Various public outreach materials will be developed including informational handouts, brochures, poster boards, newsletters, and website postings. Information presented in outreach materials will be derived from the technical tasks for developing the Mid-Coastside GWMP. The efforts required under this task are for production of materials

#### **Advisory Committee Meetings**

The following items will be addressed at the Advisory Committee Meetings:

1. Review plan requirements, objectives and goals of the Mid-Coastside GWMP. Introduce Airport Aquifer sub-basin background.

2. Develop MOU;
3. Discuss basin objectives, plan elements, and potential sub-basins and projects.
4. Present basin objectives, discuss governance, finance, and implementation.
5. Present and discuss the Draft GWMP
6. Present Final GWMP and discuss adoption and implementation.

### **Public Meetings**

Five public meetings will be advertised and held. The public meetings will be independent of Advisory Committee meetings to provide outreach to the Midcoast communities. Public meetings will be held after incorporating comments from the corresponding Advisory Committee meeting.

### **Public Hearings**

Three (3) public meetings will be held to legally adopt and to receive public comment following the draft publication of the Mid-Coastside GWMP:

1. Public Hearing to Adopt a Resolution of Intent
2. Public Hearing to Present the Draft Mid-Coastside GWMP.
3. Public Hearing to Adopt the Mid-Coastside GWMP.

**Deliverables:** Informational handouts, brochures, poster boards, newsletters, and website postings. Participation and support in Advisory Committee meetings and Public meetings. Memorandum of Understanding. Participation and support of two (2) public hearings, including development of draft resolutions to adopt a groundwater management plan.

## **Task 2. Data Collection and Analysis**

An in-depth review of available water supplies (surface, ground, recycled, municipal, agricultural, and imported water sources) and their uses in the Midcoast will be prepared. A water supply balance will be developed for existing conditions as well as for expected changes in population, land use patterns, and water demands.

Data and information collection will include:

- Groundwater levels, historical;
- Groundwater quality, historical;
- Geologic data and reports including drillers logs
- Water demand and supply, historical and projected;
- Data and information on monitoring activities;
- Data and information on potential future projects;
- Information on the coordination with land use, zoning, or water management planning;
- Information on potential supply-increase or demand-reduction projects; and



- Information on monitoring.

The information gathered will be presented in a manner that provides a complete description of the area to be managed under the Mid-Coastside GWMP, including:

- Physical structure and characteristics of the aquifer system;
- Summary of historical data;
- Issues of concern; and
- Discussion of historical and projected water demands and supplies.

Data collected will be analyzed to provide a review and document the historical and existing conditions in the Airport Aquifer. Analysis will include geological conditions with cross sections, water demands, water supply, and water quality. Quality verification and statistical checks will be performed in order to achieve consistency of the data collected. Quality assurance will entail review by a California registered Professional Geologist and Professional Engineer for all collected data.

**Deliverables:** Draft and final technical Existing Basin Characteristics section of the Mid-Coastside GWMP.

### **Task 3. Objectives and Monitoring Protocol Development**

Based on results from Task 1 and Task 2, Basin Management Objectives, monitoring protocols, and future reporting requirements will be developed.

#### **Basin Management Objectives**

Basin Management Objectives (BMOs) will result in a more reliable supply for long-term beneficial uses of groundwater and will depend on the needs seen by area stakeholders. The principal goal is to provide a basin management framework that will allow for the implementation of water management alternatives that can be implemented and revised in the future. The BMOs to be considered in the development of the Mid-Coastside GWMP will include, but are not limited to, the following:

- Prevent long-term declines in groundwater levels;
- Protect and restore groundwater recharge areas;
- Monitor and/or reduce nitrate, TCP, manganese and corrosivity concentrations;
- Increase groundwater level monitoring;
- Increase groundwater quality monitoring;
- Prevent saline water intrusion;
- Regulation of the migration of contaminated groundwater;
- Increase understanding of groundwater throughout the Midcoast;
- Determine and maintain a safe yield of groundwater for use within the sub-basin;
- Establish mitigation measures to offset identified adverse impacts of groundwater extraction;



- Develop relationships with state and federal regulatory agencies;
- Identification of well construction policies; and
- Develop standard operating procedures for groundwater monitoring.

Recommendations will be developed for how to organize areas within the sub-basin for purposes of adopting BMOs. Available well information within each BMO area will be reviewed and recommendations provided regarding the wells that could serve as reliable BMO indicator wells. The information to be reviewed includes geologic information, well construction information, historical water levels, and water quality records, as available.

The objective of developing any BMO in the Mid-Coastside GWMP are to:

- Develop a long-term balance between water demands and supplies;
- Evaluate the engineering, institutional, social, financial, and environmental aspects associated with implementing a BMO;
- Define monitoring requirements and acceptable threshold criteria for obtaining BMOs;
- Recommend BMOs that are flexible and both the implementation and monitoring can be modified as situations change and additional information becomes available; and
- Identify means of financing the recommended BMOs and associated monitoring.

Alternative BMO approaches will be examined and developed in consultation with the Advisory Committee. Once an approach is adopted, BMO criteria will be developed that are coordinated across the basin and meet the needs of the agencies. These will be presented to the Advisory Committee at one of the four scheduled meetings.

### **Monitoring Protocol**

Monitoring protocols will be developed to effectively monitor adopted BMOs. The monitoring protocols will be capable of assessing the status of the basin and predicting responses in the basin based on future management actions. The monitoring protocols will include, but not limited to, the following:

- Monitoring for groundwater quality degradation;
- Land surface elevation monitoring;
- Surface water-groundwater interaction monitoring; and
- Protocols for collecting groundwater data.

The monitoring protocols will ensure the accuracy and consistency of collected data. The protocols will also be developed with the capability to integrate with existing data collection and reporting. The Mid-Coastside GWMP monitoring protocols will also include the following supporting information:

- Map of monitoring sites for groundwater levels and quality;
- Summary of monitoring sites indicating the type and frequency of monitoring;
- Describe current or planned actions to coordinate with other land use, zoning, or water agencies

to provide periodic reports summarizing groundwater basin conditions and groundwater management activities;

- Summary of monitoring results including historical trends;
- Summary of established and proposed management actions;
- Discussion of whether management actions are making progress in meeting adopted BMOs;
- Summary of plan component changes including addition or modification of BMOs; and
- Provide periodic re-evaluation of the entire Mid-Coastside GWMP by the Advisory Committee.

**Deliverables:** Adopted BMOs with supporting documentation. Adopted Monitoring Protocols with supporting documentation.

#### **Task 4. Future Projects**

This task includes determination of potential sub-basins throughout the Midcoast to be the focus of future GWMP updates. Additional analysis, studies, and/or information collection for these sub-basins will be undertaken as a part of future GWMP updates.

**Deliverables:** Priority list of future potential sub-basins.

#### **Task 5. Implementation and Financing Plan**

An Implementation Plan will be developed to identify needed monitoring, trigger points, and steps necessary to fully implement the BMOs and water management strategies. The method of implementation will be defined by the stakeholders and Advisory Committee through the meetings taking place as part of Task 1. Two major management processes will be considered - the individual interest-based model and the mutual interest-based model. An implementation model can be a combination of the two so that the advantages of regional water management are realized without individuals feeling a loss of control over local management. Recommended implementation steps will be provided in the Implementation Plan along with a time line for each identified step.

Implementation may require a Memorandum of Understanding or a Joint Powers Authority. A Board of Directors may need to be formed with representatives from stakeholders or the Advisory Committee to guide the implementation of the GWMP.

The implementation of the Mid-Coastside GWMP, which includes a Board of Directors, Monitoring Program, and water management projects can be a major financial undertaking. A financing plan will be developed that provide the potential Board, Advisory Committee and other stakeholders with an overview of potential funding sources, programs and local and regional partnerships available in the Midcoast.

**Deliverables:** Participation in Implementation and Financing Plan development meetings. Adopted Implementation and Financing Plan with supporting documentation.

## **Task 6. Completion of Mid-Coastside Groundwater Management Plan**

### **Draft Mid-Coastside GWMP**

A Draft GWMP will be developed based on the information and adopted components from Tasks 1 through 5 above. The Mid-Coastside GWMP will convey all the information necessary for stakeholders to understand basin conditions, BMOs, local and regional water management strategies, and implementation for components of the plan. The format and layout of the document will be guided by stakeholders, but will include all components of groundwater management as identified in Water Code Section 10795 et seq. The draft GWMP will be distributed electronically on CD to the Advisory Committee and made available to the public via agency websites or other appropriate means. Feedback will be gathered following review by the Advisory Committee before a final plan is prepared.

### **Final Mid-Coastside GWMP**

A Final GWMP will be developed based on comments received on the draft document. The plan will be published as a high-quality document for dissemination to all participating stakeholder groups and local, state and federal agencies responsible for activities in the region. The document will be available for adoption by January 2016 or earlier depending on the execution of the grant agreement with DWR.

A series of public workshops and presentations to local councils, boards and membership groups will be scheduled to explain and widely publicize the objectives and implementation methods of the plan.

**Deliverables:** Draft and Final Mid-Coastside GWMP.

## **Task 7. Project Management and Coordination**

Overall management of the Mid-Coastside GWMP development requires the following effort:

- Team management and coordination;
- Technical direction of the work effort;
- Review of all deliverables and work products; and
- Task, budget, and schedule management.

Project management tasks will require numerous meetings with the stakeholders and Advisory Committee and perhaps regulatory agencies such as the California Department of Public Health and the Regional Water Quality Control Board. Progress reports will be developed and submitted to the Advisory Committee to inform the committee of the progress of the plan development including the status of budget and schedule.

**Deliverables:** Project management, including the development of monthly progress reports.

## **Task 8. Administration**

This task details the effort required to administer the Local Groundwater Assistance (LGA) grant funds if received from the Department of Water Resources (DWR).

- Administer Contracts – administration of contracts with DWR will be conducted through in-kind staff time. No grant funding will be spent on contracts.

- Develop Quarterly Reports – development and submittal of Quarterly Reports to DWR will be conducted through in-kind staff time. No grant funding will be spent on quarterly reports.
- Coordination with DWR – coordination with DWR project manager will be conducted through in-kind staff time. No grant funding will be spent on coordination with DWR.

**Deliverables:** Completed DWR funding contract, quarterly reports and coordination with DWR staff.

## ***Performance of the Project***

Progress and performance of the project will be evaluated regularly. Quarterly reports, as outlined in Task 11, will be prepared and provided to DWR to show the details of:

- Work performed;
- Major accomplishments;
- Issues or concerns that may affect the schedule or budget;
- Activities planned for the next period;
- Budget status information; and
- Schedule information.

Public meetings and meetings of the Advisory Committee will help evaluate progress and performance. These meetings, as outlined in the Work Plan, represent milestones in the development of the Mid-Coastside GWMP.

Critical milestones in the project include:

- Identification and participation of stakeholders – project performance will be based on the ability to locate and engage stakeholders in the development of the GWMP.
- Agreement on goals and BMOs – project performance will be based on the ability to gain consensus on goals and BMOs for the basin.
- Agreement on Implementation and Finance Plan – project performance will be based on the ability to gain consensus on Implementation and Finance Plan
- Completion of Mid-Coastside GWMP – project performance will be based on the ability to complete a draft and final GWMP that meets all state requirements and items detailed in this application.

## ***Environmental Compliance***

The proposed project does not qualify as a “project” under Section 15378 of the CEQA guidelines and is categorically exempt from any obligations under CEQA. The project does not include any direct or indirect changes to the existing environment nor does it include any foreseeable changes to the environment in the future.

## ***Quality Assurance***

The Quality Assurance Program will ensure that the data going into the analysis is accurate and reliable. As part of Task 2 detailed in the Project Scope, quality verification and statistical checks will be performed in order to achieve consistency of the data collected. Additional Quality Assurance work will entail review by a California-registered Professional Geologist for all geological information and either a Professional Geologist or Professional Engineer for all other information. The extensive public

process and the involvement of the Advisory Committee will also serve as a quality control check on the information included in the Mid-Coastside GWMP. The draft Mid-Coastside GWMP will be provided to stakeholders for their review. Comments, corrections, and additional input will be incorporated into the Final Mid-Coastside Multi-Basin GWMP.